

## **WE CLAIM**

1. (Previously amended) A method for transmitting information using ultra-wide band transmission, the method comprising:

allocating, for signal transmission, each of a plurality of frequency sub-bands; sending an ultra-wide band transmission comprising the information by transmitting a burst symbol cycle signal over each of the plurality of frequency sub-bands; switching off power to at least one circuit during OFF periods of a transmission to decrease power consumption; and maintaining signal frequency and phase from an end of an ON period to a beginning of the following ON period.

2. (Original) The method of claim 1, comprising sending at least two of the burst symbol cycle signals serially.

3-6. (Canceled)

7. (Previously amended) The method of claim 1, comprising utilizing at least one of an analog wave generator, digital wave generator, and a combination analog and digital wave generator.

12. (Previously amended) A method for transmitting information using ultra-wide band transmission, the method comprising: allocating, for signal transmission, each of a plurality of frequency sub-bands; and sending an ultra-wide band transmission comprising the information by transmitting a signal over each of the plurality of frequency sub-bands; wherein phase continuity is maintained by: dividing each of the frequency sub-bands into a plurality of segments; and cycling transmission between segments of each of the sub-bands; wherein the method comprises: switching off power to at least one circuit during OFF periods of a transmission to decrease power consumption; and maintaining signal frequency and phase from an end of an ON period to a beginning of the following ON period.

13. (Canceled)

14. (Previously amended) A method for transmitting information using ultra-wide band transmission, the method comprising: allocating, for signal

transmission, each of a plurality of frequency sub-bands; and sending an ultra-wide band transmission comprising the information by transmitting a signal over each of the plurality of frequency sub-bands, comprising producing at least one analog carrier wave of a frequency sub-band using outputs from a plurality of digital to analog converters; wherein the method comprises: switching off power to at least one circuit during OFF periods of a transmission to decrease power consumption; and maintaining signal frequency and phase from an end of an ON period to a beginning of the following ON period.

15. (Original) The method of claim 14, wherein producing the at least one analog carrier wave comprises each of the digital to analog converters outputting a portion of the analog carrier wave based on an input bit, and comprises cycling through input values to produce consecutive segments of the analog carrier wave.

16. (Previously amended) A method for transmitting information using ultra-wide band transmission, the method comprising: allocating, for signal transmission, each of a plurality of frequency sub-bands; and sending an ultra-wide band transmission comprising the information by transmitting a signal over each of the plurality of frequency sub-bands, comprising using a sine wave envelope to reduce side lobes in at least one carrier frequency, comprising multiplying a carrier signal by a sine wave of a lower frequency than the carrier frequency.

17. (Original) The method of claim 16, comprising varying pulse bandwidth while pulse repetition frequency remains constant, to facilitate control of signal spectrum characteristics and receiver selectivity.

25. (Previously presented) The method according to claim 16, wherein the method comprises switching off power to at least one circuit during OFF periods of a transmission to decrease power consumption; and maintaining signal frequency and phase from an end of an ON period to a beginning of the following ON period.

26. (Previously presented) The method according to claim 16, wherein the method comprises utilizing a sine wave rectifier having an adjustable threshold.